

**TECHNICAL DATA AND PROCESS SHEET**

**30% CARBON FIBER REINFORCED NYLON 6/6**

**INSTRUC PA66CF30**

**TYPICAL PROPERTIES**

<b>PROPERTY</b>	<b>ASTM METHOD</b>	<b>English</b>	<b>UNITS</b>	<b>Metric SI</b>	<b>UNITS</b>
<b>GENERAL</b>					
SPECIFIC GRAVITY	D792	1.28		1.28	
SPECIFIC VOLUME		21.64	in <sup>3</sup> /lb	0.781	cm <sup>3</sup> /gm
WATER ABSORPTION (24 Hrs)	D570	0.80	%	0.80	%
MOLD SHRINKAGE	D955	0.2-0.4	%	0.2-0.4	%
<b>MECHANICAL</b>					
TENSILE STRENGTH	D638	35,000	psi	241	MPa
ELONGATION, YIELD	D638	1-3	%	1-3	%
FLEXURAL STRENGTH	D790	51,000	psi	352	MPa
FLEXURAL MODULUS	D790	2,900,000	psi	19,995	MPa
SHEAR STRENGTH	D732	12,500	psi	86	MPa
IZOD IMPACT STRENGTH	D256				
NOTCHED 1/8"		1.5	ft.lb./in.	80	J/m
UNNOTCHED 1/8"		16	ft.lb./in.	853	J/m
ROCKWELL HARDNESS		M96	M Scale	M96	M Scale
<b>THERMAL</b>					
HDTUL	D648	495	°F	257	°C
@ 264 PSI					
COEFFICIENT OF LINEAR THERMAL EXPANSION	D696	1.1	in./in. F x10 <sup>-5</sup>	1.98	mm/mm C 10 <sup>-6</sup>
FLAMMABILITY <sup>1</sup>	U.L.Subj 94	HB@1/16	in	HB@ 1.5	mm
<b>ELECTRICAL</b>					
SURFACE RESISTIVITY		10e2-10e4	ohms/sq	10e2-10e4	ohms/sq
<b>PROCESSING</b>					
DRYING TEMPERATURE		175	°F	79	°C
DRYING TIME		4	hrs	4	hrs
MELT TEMPERATURE		500-575	°F	260 - 301	°C
MOLD TEMPERATURE		200	°F	93	°C
BACK PRESSURE		50-100	psi	0.3 - 0.7	MPa
SCREW SPEED		40-70	rpm	40-70	rpm
VENT DEPTH		0.0005-0.001	in	0.0125 - 0.025	mm

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